diagnoses during 2007 in the South-West region of Sweden. Sixty-two percent of the patients had at least one visit to the primary care, 35% had been treated as out-patient, 9% had been treated by private physician, and 7% had been treated by in-patient care; 73% had at least one dispensed drug. The total health care cost, including drug cost, was 683 million SEK. 35% were from drugs and 23%, 26%, 14%, and 1% were from in-patient, out-patient, primary, and private care. During 2007 the average drug cost per patient, who utilize the current treatment, was 8847 SEK for drugs. The average cost for in-patient care was 64,576 SEK and 13,859 SEK for out-patient care. For primary and private care the average cost was 4268 SEK and 1342 SEK. **CONCLUSIONS:** The cost for antidepressant drugs was the largest part of the total health care cost for MDD, 35%. The in-patient care was the greatest cost per patient. The relevant question is what mix of drugs should be prescribed in order to minimize the total health care cost. Further research needs to be preformed.

PMH25

COMPARISON OF ESCITALOPRAM VS. CITALOPRAM AND VENLAFAXINE IN THE TREATMENT OF MAJOR DEPRESSION IN SPAIN: CLINICAL AND ECONOMIC CONSEQUENCES

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OBJECTIVES: Population based study to determine clinical consequences and economic impact of using escitalopram (ESC) vs. citalopram (CIT) and venlafaxine (VEN) in patients initiating treatment for a new episode of major depression (MD), in real-life conditions of outpatient practice. **METHODS:** Observational, multicenter, retrospective study conducted using computerized medical records (administrative databases) of patients treated in six primary care centers and two hospitals between January 2003 and March 2007. *Study population:* patients >20 years of age diagnosed with a new episode of MD who initiate treatment with ESC, CIT or VEN, and whithout any antidepressant treatment within the previous 6 months, who were followed for 18 months or more. *Main variables:* socio-demographic variables, remission, comorbidity, annual health care costs (medical visits, diagnostic and therapeutic tests, hospitalizations, emergency room and psychoactive drugs prescribed) and non-health care costs (productivity loss at work). Statistical analyses: logistic regression and ANCOVA models. **RESULTS:** A total of 965 patients (ESC = 131; CIT = 491; VEN = 343) were included. ESC-treated patients were younger, with a higher proportion of males, and a lower specific comorbidity ($P < 0.01$). ESC-treated patients achieved higher remission rates (58.0%) compared to CIT (38.3%) or VEN (32.4%) patients ($P < 0.001$) and had lower productivity work ESC (37.9 days) vs.CIT (32.7 days) or vs. VEN (43.8 days), p = 0.042. No differences in average/unit costs of psychoactive drugs were observed between the ESC and CIT groups (€294.7 vs. €265.2), with higher costs seen in the VEN group (€643.0), p = 0.003. In the corrected model, total (health care and non-health care) costs were lower with ESC (€2276.2) vs. CIT (€3093.8), p = 0.047 and VEN (€3801.2), p = 0.045. **CONCLUSIONS:** ESC appears to be dominant in the treatment of new MD episodes when compared to CIT and VEN, resulting in higher remission rates and lower total costs.

PMH26

COST ANALYSIS OF METHADONE MAINTENANCE THERAPY (MMT) PROGRAM IN MALAYSIA

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OBJECTIVES: To analyze the cost of MMT treatment for patient with substance use disorder. **METHODS:** This was a retrospective study involving 185 opiate dependence patients who were receiving MMT treatment program in Malaysian's government hospitals starting December 2005 until February 2010. The study was done from the provider perspective using activity based costing that includes both capital and variable cost associated with MMT program. **RESULTS:** Most of the respondents were male (99%) with mean age of 38.5 years. Most (72.5%) of them were Malay and 50.5% working in semi or unskilled manual job with basic salary less than MYR1000 (US$312). Most (99.5%) were smoker with history of heroin addiction of more than 10 years. The median length of MMT treatment was 14 months. Fifty-seven percent of the patients were suffering from chronic disease. The capital cost for MMT program was US$8013.16 and the variable cost of providing a month of treatment per patient was US$50.43. Approximately 47.19% of this was for methadone and personnel cost accounted for 31.94%. The variable cost was statistically higher ($P < 0.05$) in patients present of chronic disease. **CONCLUSIONS:** This study estimated the variable cost of MMT treatment per patient in Malaysia (US$50.43/month) is less expensive compare USA (US$220/month, Jones et al., 2009). These cost data may be useful to policymakers and researchers for further developing the program.

PMH27

RECENT TRENDS IN PSYCHIATRIC PRESCRIPTION DRUG SPENDING

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OBJECTIVES: To describe new data on recent trends in U.S. psychiatric prescription drug spending and utilization over the period 2003 to 2008 and to understand drivers of those new trends. **METHODS:** SAMSA Spending Estimates were coupled with MEPS data to examine trends in mental health drug spending and utilization through 2005. 1997–2008 Thomson Reuters MarketScan Commercial Claims data were used to decompose spending where: Total Expenditures = Price X Quantity, and ΔCost/Enrollee = ΔCost/Day X ΔDays/User X ΔUsers/Enrollees. The following drugs were included in the analysis: Antidepressants, Antipsychotics, Stimulants, and Anxiolytic/Sedative/Hypnotics. **RESULTS:** The average annual growth rate in mental health prescription drug spending dropped from 28% in 1998 to 3% in 2008. The rate of growth has stayed below 10% since 2005, and was negative in 2007. For persons with private insurance, the average annual expenditure growth rate overall was 6% during the years 2001–2008, where 2% was attributable to days/user, 2% was due to users per population, and 2% was due to cost/day. In contrast for the years 1997–2001, the average growth rate overall was 18%, where 3% was attributable to days/user, 7% was due to users per population, and 8% was due to cost/day. **CONCLUSIONS:** Mental health prescription drug spending growth has slowed in recent years. This is due primarily to slower growth in additional users and slower price growth. The lower price growth is mainly due to generic entries starting in 2005, particularly within the antidepressant drug class.

PMH28

EFFECT OF PREGABALIN ON COSTS AND CONSEQUENCES IN PATIENTS WITH REFRACTORY SEVERE GENERALIZED ANXIETY DISORDER AND CONCOMITANT SEVERE SYMPTOMS OF DEPRESSION IN DAILY MEDICAL PRACTICE

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OBJECTIVES: To analyze the clinical and economic effects of the use of Pregabalin (PGB) in patients with refractory severe Generalized Anxiety Disorder (GAD) and severe concomitant depressive symptoms in daily medical practice. **METHODS:** Data were obtained from a post-hoc analysis of a 6-month, prospective, non-interventional study conducted in outpatient psychiatric clinics to ascertain the impact of broadening GAD diagnostic criteria. This before-after study included PGB naïve patients above 18 years, with GAD (using DSM-IV criteria), refractory to anxiolytics for a minimum of 3 months, severe symptoms of anxiety (HAM-A > 24) and depression (MADRS > 35), who received flexible doses of PGB either as monotherapy or add-on, per psychiatrist judgment. Changes in HAM-A and MADRS and responders rates (reduction > 50% of baseline scoring) were the study end-points, together with health care resources utilization and corresponding costs. **RESULTS:** A total of 159 patients [69.2% women, mean age 45.9 (12.6) years] fulfilled criteria for analysis. Ninety percent or more patients were previously exposed to benzodiazepines and/or antidepressants [mean 2.7 (1.3) drugs]. Adding PGB [mean dose: 223.1 (126.3) mg/day] reduced both anxiety and depressive symptoms, respectively, in HAM-A and MADRS scales, by −57.9% (from 35.5 + 5.8 to 14.8 + 9.4; $P < 0.001$, effect size: 3.57) and −58.1% (from 39.4 + 4.3 to 16.5 + 10.3; $P < 0.001$, effect size: 5.33). As a result, responder rates were 63.1% and 62.9%, respectively. Costs reductions in medical visits [−€1022 (−1,376; −669), $P < 0.001$] and hospitalizations [−€144 (−245;−44), p = 0.005], offset the higher incremental drug cost of PGB treatment [€353 (292; 415), $P < 0.001$] showing statistically reduction of health care costs; −€619 (−1,040;−197), p = 0.004. **CONCLUSIONS:** The use of Pregabalin resulted in both clinical and economic benefits in patients with severe refractory GAD and concomitant severe depressive disorder. Patients experienced a significant improvement in their anxiety and depression symptoms, improvements which were associated with significant decreases in health care costs.

PMH29

COST-CONSEQUENCE ANALYSIS OF ARIPIPRAZOLE IN SCHIZOPHRENIA IN SPAIN: DIABETES AND CORONARY HEART DISEASE PROJECTIONS (STAR STUDY)

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OBJECTIVES: Patients with schizophrenia experience elevated rates of morbidity and mortality, largely due to an increased incidence of cardiovascular disease and diabetes. The STAR study showed that the metabolic side effects of aripiprazole treatment are less than that experienced by those receiving standard-of-care (SOC) antipsychotic treatment (olanzapine, queatipine or risperidone). This study estimates the difference in direct and indirect cost-consequences of diabetes and coronary heart disease (CHD) in schizophrenia patients treated with aripiprazole or SOC. **METHODS:** On the basis of the results provided by the STAR study, risks for diabetes and CHD were projected over a time horizon of 10 years in the Spanish setting using the Stern and Framingham models. The comparators were aripiprazole versus SOC. The prevalence and costs (direct and indirect) of diabetes and CHD were obtained from Spanish sources. All costs were inflated to 2009 costs using the Spanish Health System pay and prices index. **RESULTS:** The number of avoided diabetes cases (23.4 cases per 1,000 treated patients) in patients treated with aripiprazole compared to SOC was associated with estimated total (direct and indirect) cost saving of €27,798,018 over 10 years for the Spanish population. Similarly, with aripiprazole the number of avoided CHD events (3.7 events per 1,000 treated patients) yields an estimated total cost saving of €4,173,818 over 10 years. **CONCLUSIONS:** Compared with SOC, aripiprazole

treatment can significantly reduce the number of diabetes and CHD events. As a consequence, it can provide considerable reductions in the health and economic burden to schizophrenia patients and health care services in the Spanish setting due to its favourable metabolic profile.

PMH30

ECONOMIC EVALUATION OF AGOMELATINE IN MAJOR DEPRESSIVE DISORDERS IN IRELAND

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OBJECTIVES: A cost-utility analysis of a new antidepressant, agomelatine (Valdoxan®) compared to generic fluoxetine and sertraline in the treatment of adult Major Depressive Disorders (MDD) was performed from the societal perspective and that of the Irish Health Service Executive (HSE). For each of these two perspectives, a separate analysis was performed for two different drug schemes: General Medical Services scheme (GMS) and the Drug Payments scheme (DP). **METHODS:** A Markov model was developed with health states for well, depressive episode, remission and death. The model also incorporated sleep disorders, discontinuation rates, discontinuation symptoms and adverse drug reactions. The time horizon of the analysis was two years. Remission, relapse and discontinuation rates as well as frequencies of the different clinical parameters were obtained from head-to-head comparative trials. Utility/disutility estimates were obtained from the literature. Costs (euros 2009) and effects were discounted at 4% per annum after year 1. **RESULTS:** From the societal perspective, agomelatine was dominant over both generic comparators in both drug schemes. From the HSE perspective, agomelatine was cost-effective compared to the two comparators in both drug schemes. One-way sensitivity analysis showed that the results were robust to uncertainty in model parameters. Probabilistic sensitivity analysis demonstrated that for a willingness-to-pay threshold of €45,000/QALY, agomelatine was cost-effective compared to the two comparators in more than 93% of cases for both drug schemes **CONCLUSIONS:** From the societal perspective, agomelatine was dominant over generic fluoxetine and sertraline for the treatment of adult MDD in Ireland. From the Irish HSE perspective, agomelatine was cost-effective compared to the two comparators with high probability.

PMH31

THE COST-EFFECTIVENESS OF ARIPIPRAZOLE IN PATIENTS WITH BIPOLAR I DISORDER IN THE UK

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OBJECTIVES: To explore the cost-effectiveness of aripiprazole in UK patients with bipolar I disorder (BPD). **METHODS:** A Markov state transition model was developed to estimate the cost-effectiveness of aripiprazole, post-olanzapine, compared with risperidone or quetiapine, the most commonly used atypicals in the UK after olanzapine. Modelling was undertaken from a UK NHS perspective using discount rate of 3.5%. The time horizon of the model was 5 years (NICE BPD Guideline). The model incorporated an acute manic phase and relapse prevention phase. Response to therapy (at least a 50% reduction in Young-Mania Rating Scale) and discontinuation in the acute phase were based on an indirect comparison of trials in acute manic treatment. Probabilities of experiencing a new manic or depressive episode or discontinuing treatment in the relapse prevention phase were informed by a network meta-analysis. Quetiapine (at time of analysis) and risperidone are not indicated for relapse prevention in the UK; those patients were switched to lithium. Outpatient, hospitalization and drug costs were included based on published sources. a probabilistic sensitivity analysis (PSA) was used to examine uncertainty. **RESULTS:** Key drivers in the model are cost and quality-of-life reduction associated with acute mania. Aripiprazole is more effective than quetiapine in the acute phase and than lithium in the relapse prevention phase. Therefore, used post-olanzapine, aripiprazole gains 0.025 quality adjusted life-years (QALYs) and saves £3,995 compared with quetiapine and gains 0.01 QALYs and saves £607 compared with risperidone. Results from the PSA demonstrate 92% confidence that aripirazole is cost-effective versus quetiapine, and 61% confidence versus risperidone when using a threshold of £30,000 per QALY. **CONCLUSIONS:** Aripiprazole used post-olanzapine in the treatment of BPD is a cost-effective use of NHS resources compared with quetiapine and risperidone.

PMH32

ECONOMIC EVALUATION OF AGOMELATINE IN MAJOR DEPRESIVE DISORDERS IN HUNGARY

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OBJECTIVES: A cost-effectiveness analysis of a new antidepressant, agomelatine (Valdoxan®) compared to duloxetine in the treatment of Major Depressive Disorders (MDD) in adults was performed in a Hungarian setting from a societal perspective and the National Health Insurance Fund (NHIF) perspective. **METHODS:** A Markov model was adapted with health states for well, depressive episode, remission and death. The model also incorporated sleep disorders, discontinuation rates, discontinuation symptoms and adverse drug reactions (incl. constipation, diarrhoea, dyspepsia, headache, nausea, somnolence, and sexual dysfunction). The time horizon was set to two years. An indirect comparison was run based on a meta-analysis of duloxetine from a literature review to document clinical parameters unavailable from completed trials. a prospective cost of illness study in Hungary implemented in 2009 documented direct and indirect costs of MDD. Utilities for each health state and disutilities for each clinical event were taken from the literature. The discount rate was 5% per year **RESULTS:** From the societal perspective, agomelatine was cost-saving and more effective than duloxetine. From the NHIF perspective, agomelatine resulted in 0.037 QALYs gained compared to duloxetine with 5073 HUF as additional direct costs. One way sensitivity analyses showed that the results were robust to most parameter changes. From a societal perspective, agomelatine dominates duloxetine in 75% of cases and is cost-effective in 91% of cases at a willingness-to-pay threshold of 7 million HUF/QALY. From the NHIF perspective, agomelatine is cost-effective versus duloxetine in more than 90% of cases. **CONCLUSIONS:** In a Hungarian setting, agomelatine is dominant from a societal perspective and cost-effective from a NHIF perspective versus duloxetine. These results are robust, confirmed by sensitivity analyses.

PMH33

ADJUNCTIVE ANTIPSYCHOTICS IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER IN TURKEY: A HEALTH ECONOMIC PERSPECTIVE

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OBJECTIVES: Major Depressive Disorder (MDD) is a chronic illness associated with major burden on Quality-of -Life (QoL) and health care resources. a recent study estimated annual cost being €282 per European inhabitant. Adjunctive treatments with aripiprazole, quetiapine and olanzapine have demonstrated efficacy in patients with MDD that respond insufficiently to antidepressant treatment. The objective is to estimate the cost-effectiveness of adjunctive therapies in depressive patients failing to respond to antidepressant therapy in Turkey. **METHODS:** An economic model was built simulating MDD patients between major depressive episodes (MDEs) and remission over lifetime. During MDEs, patients were treated with adjunctive aripiprazole, quetiapine or olanzapine. Patients who did not respond at 6 weeks switched to subsequent treatment lines. Comparative effectiveness between aripiprazole, quetiapine and olanzapine, was imputed using an indirect comparison combining 6-week published studies. Resource use data and unit costs were obtained from Turkish studies. **RESULTS:** Over life-time, aripiprazole patients spent less time in MDEs compared to quetiapine (7,7 weeks) and olanzapine (7.5 weeks). Compared to Quetiapine, patients with aripiprazole showed improvement in QoL (+0.045 QALY) at incremental direct cost of 421TL. Compared to olanzapine, patients with aripiprazole dominated, meaning improvement of QoL (+0.042 QALY) respectively, at lower direct cost (-32 TL), despite higher drug costs. Sensitivity analyses estimated a 87% likelihood that aripiprazole improved QoL at a comparable cost verus quetiapine and 88% versus olanzapine. **CONCLUSIONS:** This is the first lifetime health-economic model in Turkey taking patient heterogeneity into account when assessing QoL and costs of different adjunctive strategies in MDD. These results indicate that adjunctive treatment with aripiprazole provides health benefits at lower costs compared to quetiapine and olanzapine, in patients with MDD.

PMH34

COST-EFFECTIVENESS ANALYSIS OF RISPERIDONE LONG-ACTING INJECTION IN SCHIZOPHRENIA: 24-MONTH DATA FROM CZECH REPUBLIC

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OBJECTIVES: To evaluate 24 months cost-effectiveness of risperidone long-acting injection (RLAI) in patients with schizophrenia enrolled in the electronic-Schizophrenia Treatment Adherence Registry (e-STAR) from Czech Republic. This evaluation is a follow-up of 12 months data presented at the European ISPOR congress (Athens 2008). **METHODS:** e-STAR is an international 24-month, prospective, observational study in patients with schizophrenia who commenced RLAI treatment (based on SmPC indication). Analyzed data covered one year of retrospective (prior to RLAI initiation) vs. 24 months of prospective observation. a total of 607 patients have completed the 24 months study. Assessed direct costs were: hospitalization (duration and frequency), antipsychotic medication and co-medication all from the payer's perspective in 2009 prices. Efficacy parameters included GAF (Global Assessment of Functioning) and CGI-S (Clinical Global Impression-Severity) scores. **RESULTS:** Mean annual costs/patient increased form €2173 (1 Euro = 26 CZK) in the retrospective period to €4270 during the first and 4453 during the second years of observation. Mean cost drivers were hospitalization (63% of total retrospective costs) and antipsychotic medication (90% and 91% of total prospective costs). Costs of RLAI could not be fully offset by significant reductions in hospitalization (both frequency and duration) and co-medication. Improvements in GAF and CGI scores seen at the first treatment year were maintained during year 2 of assessment. Overall GAF changed from 49.6 (baseline) to 74.6 (at 24 month), CGI decreased from baseline 4.61 to 2.96 (24-month). Cost-effectiveness (costs/clinically relevant change in parameters) could also be maintained. More than one-third of patients achieved disease remission, resulting in acceptable incremental €850/patient in remission. **CONCLUSIONS:** Switching to risperidone long-acting injection in patients with treatment failure, non-compliance or intolerance